REMARKS

This Response is submitted in reply to the final Office Action dated August 25, 2006, issued in connection with the above-identified application. Claims 1-3 were canceled, so claims 4-9 are all the claims presently pending in the application. With this Response, claims 4, 6 and 8 have been amended. No new matter has been introduced by this Response; thus favorable reconsideration is respectfully requested.

I. Examiner Interview

The Applicants thank Examiner Bello for the interview conducted with the Applicants' representative on October 17, 2006. During the interview, it was emphasized that neither Denkin nor Liu appear to disclose, teach or suggest two sets of add and drop modules configured on different boards at the same node. In other words, the use of redundant add and drop modules at a network node to avoid a single point of failure at that node. Moreover, it was emphasized that this redundancy results in a unique circuit configuration of the add and drop modules. In particular, an add module on one board can be connected directly in series with a drop module of another board. At the conclusion of the interview, the Examiner suggested clarifying the meaning of the phrase "directly in series" with regard to the electrical connections between the add and drop modules (e.g., without intervening components). It was agreed that such a clarification of the claims would likely distinguish the present invention over the cited references.

II. Claim Rejections

In the Office Action, claims 4 and 5 stand rejected under 35 U.S.C. §102(e) as being anticipated by Denkin (U.S. Patent No. 6,266,168, hereafter "Denkin"). Claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liu et al. (U.S. Patent No. 5,953,141, hereafter "Liu"). Finally, claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Denkin or Liu. The Applicants traverse these rejections for the following reasons.

To expedite prosecution, the Applicants have herein amended independent claims 4, 6 and 8 consistent with the suggestions made by the Examiner during the Interview on October 17, 2006. Specifically, the independent claims have been amended to point out that add and

drop modules on different boards are positioned or inserted directly in series *without intervening components*. This feature of the present invention is not believed to be disclosed, taught or suggested by the cited prior art, and is fully supported by the Applicants' disclosure. (See, Applicants' Application, Fig. 2-Fig. 4).

In Denkin, Fig. 1 illustrates two separate optical nodes 125, 150 in an optical transmission system, wherein each node 125, 150 has one multiplexing unit OMU 10-1, 10-2 and one demultiplexing unit ODU 20-1, 20-2. Optical signal transmission between the nodes 125, 150 is provided via two optical protection switches 50, 75 and the bidirectional service lines 25, 26, 30, 31 connecting the two nodes 125, 150. Thus, the connection between a multiplexing unit OMU 10-1, 10-2 and a demultiplexing unit ODU 20-1, 20-2 is interrupted by at least the two optical protection switches 50, 75, and the bidirectional service lines 25, 26, 30, 31. In fact, the bidirectional service lines include optical amplifiers 40-1, 40-2, 41-1, 41-2, which add additional intervening components to the connection. Thus, a multiplexing unit OMU 10-1, 10-2 of one node 125, 150 cannot be connected directly in series (without intervening components) with a demultiplexing unit ODU 20-1, 20-2 of another node 125, 150, as claimed.

To this end, the network nodes 125, 150 appear to suffer from a single point of failure problem that is avoided by the present invention. That is, the failure of a single multiplexing unit OMU 10-1, 10-2 or a single demultiplexing unit ODU 20-1, 20-2 would interrupt signal transmission at the node 125, 150. This is mainly because each network node 125, 150 is situated at a different end of the optical transmission system, and neither node includes redundant multiplexing or demultiplexing units. Conversely, in the present invention, the failure of an add or drop module at a network node would not interrupt signal transmission at that node because redundant modules (e.g., add and drop) are provided. This is a clear advantage over the optical transmission system described in Denkin.

Moreover, Liu fails to overcome the deficiencies noted above in Denkin. Liu is directed to an apparatus and method for constructing an optical wavelength-routing network in which each network node is a dynamic add-drop multiplexer (OADM). Although Liu describes the use of add and drop modules on the OADM, nothing in the reference teaches or suggests that add and drop modules on different boards are positioned or inserted directly in series *without intervening components*. Accordingly, even if one of ordinary skill in the art were to combine

the teachings of Denkin and Liu, the combination still would not teach or suggest all the features recited in at least independent claims 4, 6 and 8.

Independent claims 4, 6 and 8 are distinguished over Denkin and Liu, individually or in combination, for at least the reasons noted above. Likewise, dependent claims 5, 7 and 9 are distinguished over Denkins and Liu, individually or in combination, based on their dependency from independent claims 4, 6 and 8.

III. Conclusion

Based on the foregoing, the Applicants respectfully request withdrawal of the claim rejections and allowance of the application. If there are any additional fees that are due in connection with this application as a whole, the Director is authorized to deduct those fees from Deposit Account No. 02-1818. If such a deduction is made, please indicate Attorney Docket No. 0112740-261 on the account statement.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY 

Mark D. Pratt
Reg. No. 45,794
Customer No. 29177
Phone: 202-955-7003

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